

REMARKS

The office action of July 1, 2003, has been carefully considered.

It is noted that the claims are objected to on formal grounds.

Claims 14-16, 18-19 and 21 are rejected under 35 U.S.C. 102(b) over Foreign document 2718793.

Claim 17 is rejected under 35 U.S.C. 103(a) over FD '793.

Claim 20 is rejected under 35 U.S.C. 103(a) over FD '793.

In view of the Examiner's objections to the claims, applicant has amended claim 18 and added an introduction for the claims.

In view of these changes, it is respectfully submitted that the objections to the claims are overcome and should be withdrawn.

It is respectfully submitted that the claims presently on file differ essentially and in an unobvious, highly advantageous manner from the construction disclosed in the reference.

Turning now to the reference, it should be mentioned that FD '793 corresponds to U.S. Patent No. 4,141,266. This reference is directed to a flying drum shear for cutting the front and rear crop end of a prerolled strip in a roughing mill prior to rolling in a finishing stand. The speeds of the strip in roughing mills are very low. For this reason, the flying shear according to the reference can only operate slowly and, because of the large thickness of the prerolled hot strip, the shear is of very heavy construction. High-speed cuts cannot be carried out with this shear.

The shears of the reference have two shear or blade drums that are arranged relative to one another so that with each rotation a cut takes place. Thus, the blade is accelerated when the strip engages the blade, makes its first cut and is then stopped again. Only when the next cut is necessary is the blade again accelerated for cutting.

In the shear according to the reference, the upper shear drum comprises bearing chucks which are guided essentially vertically in a stand. The bearing chucks are driven in vertical direction through a lever device and an angle drive. This configuration allows only very slow cuts with the application of a great force. The reference does not teach constant driving of the drums at a peripheral speed corresponding to the strip speed, as in the present invention. The reference, in the paragraph beginning on line 5 of page 11 (corresponding to the paragraph beginning on column 4, line 38 of U.S. Patent 4,141,266) states that when the strip reaches a certain speed into the flying shear the drums are actuated. This is always undertaken with strip from 40-80 mm in thickness (see col. 1, lines 35-36 of '266, and page 5, lines 3-4 of FD '793). The paragraph beginning at line 45 of column 4 of '266 and the paragraph beginning on line 10 of page 11 of FD '793 state that the blades move along a circular path and start the shearing of the hot strip. This type of shearing forms needle-like burrs, which can lead to flaws in the surface of the strip. In FD '793, the blades move further along the circular path to avoid producing these burrs. This further movement takes place depending upon the position of the blade via a cam projection 41 and the sensor 50. This is described in the

paragraph beginning on line 55 of column 4 of U.S. Pat. '266 and the paragraph beginning on line 20 of page 11 of FD '793. From this description it is believed clear that the reference discloses a toggle drive.

The present invention, on the other hand, is directed to a high speed shear which is arranged at the end of a finishing train. In order to make it unnecessary to accelerate large masses, as it is the case, for example, in the German reference relied on by the Examiner and also in German application OS 41 28 970, one of the two drums of the shear is arranged between two rockers. Before the cut is carried out, each rocker is adjusted by shortening the respective support element to an effective position in which the cuts can be carried out appropriately. Subsequently, another drive, either the crank drive 12 or the piston-cylinder unit 16, carries out the cutting movement.

When the present invention is compare with FD '793 there are several differences. In FD '793, for cutting, the blade is driven and then stopped. In the present invention, on the other hand, the blades are driven continuously at a peripheral speed that corresponds with the speed of the strip to be cut. Furthermore,

the blades in the reference are mounted in blade stands so as to be at an angle to the strip. Such a construction has nothing to do with a rocker construction as in the presently claimed invention. The toggle drive of the reference is more correctly comparable to the support element 10 of the present invention, not the rocker.

The cutting device according to the present invention, on the other hand, is intended for rapidly carried out cuts and, therefore, has small masses. In addition, the device according to the present invention includes two drives which are actuated successively in order to carry out a cut. First, the support elements are shortened to an effective position for effecting cuts and subsequently the drive 12, 13 or the drive 16 in the support element 10 carries out the cutting movement. discloses a combined merchandise container and display device. There is no disclosure of a container constructed to be a flying disc, nor is there any disclosure or discussion of constructing the container to have good flying characteristics, as in the presently claimed invention.

In view of these considerations it is respectfully submitted


HM-349

that the rejection of claims 14-16, 18-19 and 21 under 35 U.S.C. 102(b), and the rejections of claims 17 and 20 under 35 U.S.C. 103(a) over the above-discussed reference are overcome and should be withdrawn.

Reconsideration and allowance of the present application are respectfully requested.

Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademark Office Deposit Account No. 11-1835.


Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450, on October 31, 2003.

By: 
Friedrich Kueffner

Date: October 31, 2003